AMENDMENT UNDER 37 C.F.R. § 1.116 Attorney Docket No.: Q88724

Application No.: 10/540,250

**AMENDMENTS TO THE CLAIMS** 

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

Claims 1. - 5. (canceled).

6. (currently amended): A-method for producing a flue gas NO<sub>x</sub> removal apparatus

consisting of a plurality of NO<sub>x</sub> removal catalyst layers provided in the gas flow direction, each

catalyst layer being composed of a plurality of honeycomb NO<sub>x</sub> removal catalysts juxtaposed in

a direction crossing the gas flow direction,

each honeycomb NO<sub>x</sub> removal catalyst having gas conduits including an aperture for

feeding an exhaust gas from an inlet to an outlet of each conduit and performing NOx removal on

the sidewalls of the conduit, the gas conduits constituting the plurality of the NOx removal

catalyst layers each having approximately the same aperture size,

characterized in that each of the NO<sub>x</sub> removal catalysts forming each NO<sub>x</sub> removal

catalyst layer has an approximate length such that the flow of the exhaust gas which has been fed

into the gas conduits is straightened in the vicinity of the outlet, that the length (Lb) is specified

by a sustained turbulent flow distance (Lt) which is the distance from the inlet to a site where

turbulent flow energy is lost in the course of transition from turbulent flow to laminar flow, and

that two NOx removal catalyst layers adjacent to each other are disposed with a space

therebetween, the space serving as a common gas conduit where exhaust gas flows discharged

through the NO<sub>x</sub> removal catalysts are intermingled one another.

2

AMENDMENT UNDER 37 C.F.R. § 1.116 Attorney Docket No.: Q88724

Application No.: 10/540,250

7. (currently amended): A method for producing a flue gas NO<sub>x</sub> removal apparatus according to claim 6, wherein the length Lb (mm) is represented by equation (A):

$$Lb = a(Ly/Lys \cdot 22e^{0.035(Ly \cdot Uin)})$$
 (A)

(wherein Uin (m/s) represents a gas inflow rate, Ly (mm) represents an aperture size, Lys is an aperture size of 6 mm (constant value), and "a" is a constant falling within a range of 3 to 6, when the aperture size (Ly) is 6 mm and the gas inflow rate is 6 m/s).

- 8. (currently amended): A method for producing a flue gas  $NO_x$  removal apparatus according to claim 6, wherein the length of the  $NO_x$  removal catalyst falls within a range of 300 mm to 450 mm.
- 9. (currently amended): A method for producing a flue gas NO<sub>x</sub> removal apparatus according to claim 7, wherein 3 to 5 stages of the NO<sub>x</sub> removal catalyst layers each having a specific length (Lb) are provided.
- 10. (currently amended): A method for producing a flue gas NO<sub>x</sub> removal apparatus according to claim 8, wherein 3 to 5 stages of the NO<sub>x</sub> removal catalyst layers each having a specific length (Lb) are provided.